



Form GSOP 1-PIN (04/98)

STATE OF CALIFORNIA  
Department of General Services - Office of Procurement

## PURCHASE ORDER

Page 1

Purchase Order No. Rev. Date  
62312 2/23/2009

Supplier No.	Solicitation No.	Delivery Date	FOB Point	Invoice Terms
231223	57202	60 Days ARO	Destination	

SUNWEST SALES COMPANY  
30952 SAN CLEMENTE STREET  
HAYWARD, CA 94544-7127  
Attn: ALEX COS  
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DEPT. OF TRANSPORTATION  
SACRAMENTO WAREHOUSE  
2001 EVERGREEN STREET  
SACRAMENTO, CA 95815C  
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CALTRANS-ACCTG/OFC B-15  
OPAW - WHSE PURCHASING  
PO BOX 168018 MS# 33  
SACRAMENTO CA 95816-8018

Agency Billing	Agency Purchase Estimate	Purchase Estimate	Revision
60006	22-W1345JW	67344	0

Phone: 510-324-8775

Agency Contact	Phone	Date Received
JOHN WILLIAMS	916-227-6031	

Item No.	Quantity	Unit	Commodity Code	Description	Unit Price	Extension
THE GENERAL PROVISIONS FOR NON-IT COMMODITIES ARE HEREBY INCORPORATED BY REFERENCE. THESE GENERAL PROVISIONS CAN BE OBTAINED BY PHONING (916) 375-4400 OR BY ACCESSING OUR WEBSITE AT:  www.documents.dgs.ca.gov/pd/modellang/GPnonIT0407.pdf  THE FOLLOWING INFORMATION IS PROVIDED FOR AGENCY USE ONLY:  PRIME CONTRACTOR: SB  FISCAL YEAR: 2008/2009  FOR THE PURPOSE OF THIS AWARD, ONLY F.O.B. Destination will be accepted.  This Purchase order has been registered into the state contract and procurement registration system (https://www.scprrs.dgs.ca.gov/). The registration number is: 17600309359924.  NOTE: Attachments accompany this PO as follow:  SPECIFICATION- #9705-0530 OF (3) THREE PAGES, DATED DECEMBER 4, 2008  PALLETS, WOODEN, SPECIFICATION #3990-01A-01 OF THREE (3) PAGES, DATED JANUARY 2001  PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS, DOT-QPL OF EIGHT (8) PAGES, DATED DECEMBER 4, 2008						
1	12510	EA	9705-600-0180-1	POST HIGHWAY GUIDE MARKER POST PLASTIC HIGHWAY GUIDE MARKER POST AS DESCRIBED IN #9705-0530 OF (3) THREE PAGES, DATED DECEMBER 4, 2008	6.6200	82,816.20
2	12456	EA	9705-600-0180-1	POST HIGHWAY GUIDE MARKER POST PLASTIC HIGHWAY GUIDE MARKER POST AS DESCRIBED IN #9705-0530 OF (3) THREE PAGES, DATED DECEMBER 4, 2008	6.6200	82,458.72
Total Value:						165,274.92
CHANGE ORDERS:						

Sales and/or use tax to be extra unless noted above

Bayer Evonne Rogers	Phone 916-375-4346	BOC Number
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STATE OF CALIFORNIA  
BID SPECIFICATION  
HIGHWAY GUIDE MARKER POST

9705-0530

1. SCOPE

- 1.1 These specifications define requirements for one piece drivable flexible highway guide and clearance marker posts which are designed for installation with a post driver. The posts shall be listed on the Pre-qualified and Tested Signing and Delineation Materials list. A copy of the list can be obtained from the Transportation Laboratory.

2. APPLICABLE SPECIFICATIONS / STANDARDS

- 2.1 Specifications and standards referenced in this document in effect on the opening of the Invitation for Bid, form a part of this specification.
- 2.2 All material supplied shall meet the NCHRP (National Cooperative Highway Research Project) Report 350 Criteria for Category 1 devices. Supplier shall provide self-certification upon request to the Transportation Laboratory.

3. GENERAL

Specifications control:

Date issued: February 2008

Issued by: State of California

Department of Transportation

Procurement & Contracts

1727 30TH Street

Sacramento CA 95816

Specifications for drive able flexible guide and clearance marker posts.

Department of Transportation Stock Numbers:

CT # 9330-1287-6

CT # 9330-1288-8

3.1 Construction

All posts shall be a one piece design that can be driven into the roadside soil by one person using a manual post driver. Posts with soil retaining clips at the bottom shall be considered one piece.

3.2 Material

- 3.2.1 Guide marker and clearance marker posts shall be durable plastic or reinforced plastic.
- 3.2.2 Posts shall be manufactured from an impact resistant material, and so designed that an installed post is capable of self erecting and remaining serviceable after being subjected to a series of direct impacts by a typical passenger sedan, at temperatures of 40° F or above.
- 3.2.3 The use or incorporation of recycled plastic material, all or part, provided the finished posts comply with all other requirements of this specification, is encouraged.

3.3 Workmanship

The post shall exhibit good workmanship and shall be free of burns, discoloration, contamination, and other objectionable marks or defects, which affect appearance or serviceability.

3.4 Marking

The top of the post on the side away from traffic shall be date stamped showing the month and year of fabrication. The numerals shall be at least ¼ of an inch in height and shall be either die stamped or legibly stamped with permanent ink.

#### 4. REQUIREMENTS

##### 4.1 Dimensions

- 4.1.1 Width: The post shall have a minimum width of 3" facing traffic.
- 4.1.2 Length: The post shall be of such length to provide a height of 48 inches above the ground surface unless otherwise specified, and to provide the required anchoring depth as specified below. Each post will be 5'6"  $\pm$ 2%.

##### 4.2 Base anchoring

- 4.1.1 The post shall be designed to facilitate a permanent installation, which shall resist overturning, twisting, and displacement from wind and impact forces.
- 4.1.2 The post shall be designed for an anchoring depth of 18" to 24". The manufacturer shall provide detailed installation instructions. If a soil anchoring system is used it shall be integral to the post.

##### 4.3 Color

- 4.3.1 The post shall be white, opaque color.
- 4.3.2 The yellowness index shall not exceed 8 when tested in accordance with ASTM Designation: E 313.
- 4.3.3 The daytime luminance factor, Y%, shall be  $\geq$ 70.

##### 4.4 Physical properties and Performance

- 4.4.1 Heat resistance: The post shall be conditioned  $\geq$ 2 hours in an oven at  $60^{\circ} + 2^{\circ}$  C. The conditioned post shall be capable of straightening itself within 5 minutes when bent 90 degrees at the midpoint for each of 4 bends. The conditioning temperature shall be maintained while the test is performed.
- 4.4.2 Cold resistance: The post shall be conditioned  $\geq$ 2 hours at  $-20^{\circ} + 2^{\circ}$  C in an environmentally controlled test chamber. Testing shall be performed in the environmental chamber.
  - 4.4.2.1 The post shall not be adversely affected when a person, standing approximately at the center of the post, bends the free half of the post to a 90-degree angle with the remaining section being stood upon. The post shall return to its original shape within 60 seconds for each of four separate bends.
  - 4.4.2.2 A steel ball weighing 2 pounds shall be dropped a distance of 5' through a virtually frictionless vertical guide to impact the surface of the post. The surface of the post being struck by the steel ball shall be in a horizontal position, with the post supported and held in position at both ends. The post shall be subjected to 5 impact tests concentrated near the middle of the post. Fracturing, cracking, or splitting of the post shall constitute failure.
- 4.4.3 Colorfastness: Post materials shall be exposed for 500 hours in a Xenon Arc Exposure Apparatus (ASTM Designation: G155, table X3.1, Cycle 1) with no significant yellowing or darkening. The yellowness index after exposure when measured in accordance with these specifications, shall not be more than 16. The daylight luminance factor, Y%, shall be  $\geq$ 50.
- 4.4.4 Impact resistance: The posts shall remain functional after 10 impacts with a vehicle at 55 mph. A maximum of 50% of the sheeting may be lost at the end of the 10 impacts. National Transportation Product Evaluation Program (NTPEP) test data will satisfy this requirement.

**5. RETROREFLECTIVE SHEETING**

- 5.1 The retroreflective sheeting affixed to the post shall be a brand with current status on the Pre-qualified and Tested Signing and Delineation Materials listing and shall comply with the requirements of ASTM Designation: D 4956, Type III or higher.
- 5.2 The sheeting shall be at least three inches by twelve inches and mounted on the top 14" of the post with the reflector facing in the direction of the oncoming traffic.
- 5.3 The reflector shall be protected from scratches, abrasions, and other physical damage during shipping by an easily removable "masking" sheet.

**6. PACKAGING**

- 6.1 Each Carton shall contain 20 posts and be marked with the color of the post, retroreflective sheeting color and the Caltrans Stock Number.
- 6.2 Load shall be secured with plastic banding no more than 5" from each end.

**7. PALLETIZATION**

- 7.1 Pallets shall be made of wood, size of pallet to accommodate carton length and width with no overhang on pallet.
- 7.2 All pallets shall be the same size and in good condition.
- 7.3 Cartons shall be stacked 3 high and 5 across (15 cartons per pallet).
- 7.4 Pallets to have stringers on bottom and top with 3 each 2" x 4" runners as shown on the attached drawing.
- 7.5 Packaging and palletizing not in conformance with the above will be cause for rejection.

**8. INSPECTION**

- 8.1 Items delivered shall be inspected by the Division of Engineering Services, Materials Engineering and Testing Services.
- 8.2 Material not meeting specifications will be rejected.
- 8.3 Time required for testing shall not exceed thirty (30) days.

## PREQUALIFIED AND TESTED SIGNING AND DELINEATION MATERIALS

The Department of Transportation maintains the following list of Pre-qualified and Tested Signing and Delineation Materials. The Engineer shall not be precluded from sampling and testing products on the list of Pre-qualified and Tested Signing and Delineation Materials.

The manufacturer of products on the list of Pre-qualified and Tested Signing and Delineation Materials shall furnish the Engineer a Certificate of Compliance in conformance with the provisions in Section 6-1.07, "Certificates of Compliance," of the Standard Specifications for each type of traffic product supplied.

For those categories of materials included on the list of Pre-qualified and Tested Signing and Delineation Materials, only those products shown within the listing may be used in the work. Other categories of products not included on the list of Pre-qualified and Tested Signing and Delineation Materials may be used in the work provided they conform to the requirements of the Standard Specifications.

Materials and products may be added to the list of Pre-qualified and Tested Signing and Delineation Materials if the manufacturer submits a New Product Information Form to the New Product Coordinator at the Transportation Laboratory. Upon a Departmental request for samples, sufficient samples shall be submitted to permit performance of required tests. Approval of materials or products will depend upon compliance with the specifications and tests the Department may elect to perform.

### PAVEMENT MARKERS, PERMANENT TYPE

#### RETROREFLECTIVE WITH ABRASION RESISTANT SURFACE (ARS)

1. Apex, Model 921AR (4" x 4")
2. Ennis Paint, Models C88 (4" x 4"), 911 (4" x 4") and 953 (2.75" x 4.5")
3. Ray-O-Lite, Model "AA" ARS (4" x 4")
4. 3M Series 290 (3.5" x 4")
5. 3M Series 290 PSA
6. Glowlite, Inc. Model 988AR (4" x 4")

#### RETROREFLECTIVE WITH ABRASION RESISTANT SURFACE (ARS) (for recessed applications only)

1. Ennis Paint, Model 948 (2.3" x 4.7")
2. Ennis Paint, Model 944SB (2" x 4")\*
3. Ray-O-Lite, Model 2002 (2" x 4.6")
4. Ray-O-Lite, Model 2004 ARS (2" x 4") - \*For use only in 4.5" wide (older) recessed slots

#### NON-REFLECTIVE, 4 INCH ROUND

1. Apex Universal (Ceramic)
2. Apex Universal, Models 929 (ABS) and 929PP (Polypropylene)
3. Glowlite, Inc., (Ceramic)
4. Hi-Way Safety, Inc., Models P20-2000W and 2001Y (ABS)
5. Interstate Sales, "Diamond Back" (Polypropylene)
6. Novabrite Models Cdot (White) Cdot-y (Yellow), Ceramic
7. Novabrite Models Pdot-w (White) Pdot-y (Yellow), Polypropylene
8. Three D Traffic Works TD10000 (ABS), TD10500 (Polypropylene)

## PAVEMENT MARKERS, TEMPORARY TYPE

### TEMPORARY MARKERS FOR LONG TERM DAY/NIGHT USE (180 DAYS OR LESS)

1. Vega Molded Products "Temporary Road Marker" (3" x 4")

### TEMPORARY MARKERS FOR SHORT TERM DAY/NIGHT USE (14 DAYS OR LESS)

(For seal coat or chip seal applications, clear protective covers are required)

1. Apex Universal, Model 932
2. Filtrona Extrusion, Models T.O.M., T.R.P.M., and "HH" (High Heat)
3. Hi-Way Safety, Inc., Model 1280/1281
4. Glowlite, Inc., Model 932

## STRIPING AND PAVEMENT MARKING MATERIAL

### PERMANENT TRAFFIC STRIPING AND PAVEMENT MARKING TAPE

1. Advanced Traffic Marking, Series 300 and 400
2. Brite-Line, Series 1000
3. Brite-Line, "DeltaLine XRP"
4. D. Swarco Industries, "Director 35" (For transverse application only)
5. Swarco Industries, "Director 60"
6. 3M, "Stamark" Series 380 and 5730
7. G. 3M, "Stamark" Series 420 (For transverse application only)

### TEMPORARY (REMOVABLE) STRIPING AND PAVEMENT MARKING TAPE (180 DAYS OR LESS)

1. Advanced Traffic Marking, Series 200
2. Brite-Line, Series 100
3. Garlock Rubber Technologies, Series 2000
4. P.B. Laminations, Aztec, Grade 102
5. Swarco Industries, "Director-2"
6. Trelleborg Industries, R140 Series
7. 3M, Series 620 "CR", and Series A750
8. 3M, Series A145, Removable Black Line Mask Black Tape: for use only on Asphalt Concrete Surfaces)
9. Advanced Traffic Marking Black "Hide-A-Line" (Black Tape: for use only on Asphalt Concrete Surfaces)
10. Brite-Line "BTR" Black Removable Tape (Black Tape: for use only on Asphalt Concrete Surfaces)
11. Trelleborg Industries, RB-140 (Black Tape: for use only on Asphalt Concrete Surfaces)

### PREFORMED THERMOPLASTIC (HEATED IN PLACE)

1. Flint Trading Inc., "Hot Tape"
2. Flint Trading, "Premark Plus"
3. Ennis Paint Inc., "Flametape"

### CERAMIC SURFACING LAMINATE, 6" x 6"

1. Highway Ceramics, Inc.

## CLASS 1 DELINEATORS

### ONE PIECE DRIVEABLE FLEXIBLE TYPE, 66 INCH

1. Filtrona Extrusion, "Flexi-Guide Models 400 and 566"

2. Carsonite, Curve-Flex CFRM-400
3. Carsonite, Roadmarker CRM-375
4. FlexStake, Model 654 TM.
5. GreenLine Model CGD1-66

**SPECIAL USE TYPE, 66"**

1. Filtrona Extrusion, Model FG 560 (with 18" U-Channel base)
2. Carsonite, "Survivor" (with 18 inch U-Channel base)
3. Carsonite, Roadmarker CRM-375 (with 18" U-Channel base)
4. FlexStake, Model 604
5. GreenLine Model CGD (with 18" U-Channel base)
6. Impact Recovery Model D36, with #105 Drive able Base
7. Safe-Hit with 8" pavement anchor (SH248-GP1)
8. Safe-Hit with 15" soil anchor (SH248-GP2) and with 18" soil anchor (SH248-GP3)

**SURFACE MOUNT TYPE, 48"**

1. Bent Manufacturing Company, Masterflex Model MF-180EX-48
2. Carsonite, "Channelizer"
3. FlexStake, Models 704, 754 TM and EB4
4. Impact Recovery Model D48, with #101 Fixed (Surface-Mount) Base
5. Three D Traffic Works "Channelflex" ID No. 522248W

**CHANNELIZERS**

**SURFACE MOUNT TYPE, 36"**

1. Bent Manufacturing Company, Masterflex Models MF-360-36 (Round) & MF-180-36 (Flat)
2. Filtrona Extrusion, Flexi-Guide Models FG300PE, FG300UR and FG300 EFX
3. Carsonite, "Super Duck" (Round SDR-336)
4. Carsonite, Model SDCF03601MB "Channelizer"
5. FlexStake, Models 703, 753 TM and EB3
6. GreenLine, Model SMD-36
7. Hi-Way Safety, Inc. "Channel Guide Channelizer" Model CGC36
8. Impact Recovery Model D36, with #101 Fixed (Surface-Mount) Base
9. Safe-Hit, Guide Post, Model SH236SMA and Dura-Post Model SHL36SMA
10. Three-D Traffic Works "Boomerang" 5200 Series

**LANE SEPARATION SYSTEM**

1. Filtrona Extrusion "Flexi-Guide (FG) 300 Curb System"
2. Qwick Kurb, "Klemmfix Guide System"
3. Dura-Curb System
4. Tuff Curb

**CONICAL DELINEATORS, 42" (For 28 inch Traffic Cones, see Standard Specifications)**

1. Bent Manufacturing Company "T-Top"
2. Plastic Safety Systems "Navigator-42"

3. Traffix Devices "Grabber"
4. Three D Traffic Works "Ringtop" TD7000, ID No. 742143
5. Three D Traffic Works, TD 7500
6. Work Area Protection Corp. C-42

#### **OBJECT MARKERS**

##### **TYPE "K", 18"**

1. Filtrona Extrusion, Model FG318PE
2. Carsonite, Model SMD 615
3. FlexStake, Model 701 KM
4. Safe-Hit, Model SH718SMA

##### **TYPE "K-4" / "Q" OBJECT MARKERS, 24"**

1. Bent Manufacturing "Masterflex" Model MF-360-24
2. Filtrona Extrusion, Model FG324PE
3. Carsonite, "Channelizer"
4. FlexStake, Model 701KM
5. Safe-Hit, Models SH8 24SMA\_WA and SH8 24GP3\_WA
6. Three D Traffic Works, ID No. 531702W and TD 5200
7. Three D Traffic Works, ID No. 520896W

#### **CONCRETE BARRIER MARKERS AND TEMPORARY RAILING (TYPE K) REFLECTORS**

##### **IMPACTABLE TYPE**

1. ARTUK, "FB"
2. Filtrona Extrusion, Models PCBM-12 and PCBM-T12
3. Duraflex Corp., "Flexx 2020" and "Electriflexx"
4. Hi-Way Safety, Inc., Model GMKRM100
5. Plastic Safety Systems "BAM" Models OM-BARR and OM-BWAR
6. Three D Traffic Works "Roadguide" Model TD 9304

##### **NON-IMPACTABLE TYPE**

1. ARTUK, JD Series
2. Plastic Safety Systems "BAM" Models OM-BITARW and OM-BITARA
3. Vega Molded Products, Models GBM and JD
4. Plastic Vacuum Forming, "Cap-It C400"

#### **METAL BEAM GUARD RAIL POST MARKERS (For use to the left of traffic)**

1. Filtrona Extrusion, "Mini" (3" x 10")
2. Creative Building Products, "Dura-Bull, Model 11201"
3. Duraflex Corp., "Railrider"
4. Plastic Vacuum Forming, "Cap-It C300"

**CONCRETE BARRIER DELINEATORS, 16" (For use to the right of traffic)**

1. Filtrona Extrusion, Model PCBM T-16
2. Safe-Hit, Model SH216RBM

**CONCRETE BARRIER-MOUNTED MINI-DRUM (10" x 14" x 22")**

1. Stinson Equipment Company "SaddleMarker"

**GUARD RAILING DELINEATOR (Place top of reflective element at 48" above plane of roadway)**

**WOOD POST TYPE, 27"**

1. Filtrona Extrusion, FG 427 and FG 527
2. Carsonite, Model 427
3. FlexStake, Model 102 GR
4. GreenLine GRD 27
5. Safe-Hit, Model SH227GRD
6. Three D Traffic Works "Guardflex" TD9100
7. New Directions Mfg, NDM27

**STEEL POST TYPE**

1. Carsonite, Model CFGR-327 with CFGRBK300 Mounting Bracket

**RETROREFLECTIVE SHEETING**

**CHANNELIZERS, BARRIER MARKERS, AND DELINEATORS**

1. Avery Dennison T-6500 Series (For rigid substrate devices only)
2. Avery Dennison WR-7100 Series
3. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
4. Reflexite, PC-1000 Metalized Polycarbonate
5. Reflexite, AC-1000 Acrylic
6. Reflexite, AP-1000 Metalized Polyester
7. Reflexite, Conformalight, AR-1000 Abrasion Resistant Coating
8. 3M, High Intensity

**TRAFFIC CONES, 4" AND 6" SLEEVES**

1. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
2. Reflexite, Vinyl, "TR" (Semi-transparent) or "Conformalight"
3. 3M Series 3840
4. Avery Dennison S-9000C

**DRUMS**

1. Avery Dennison WR-6100
2. Nippon Carbide Industries, Flexible Ultralite Grade (ULG) II
3. Reflexite, "Conformalight", "Super High Intensity" or "High Impact Drum Sheeting"
4. 3M Series 3810

**BARRICADES TYPE I, MEDIUM-INTENSITY (TYPICALLY ENCLOSED LENS, GLASS-BEAD ELEMENT)**

1. Nippon Carbide, CN8117

2. Avery Dennison, W 1100 series
3. 3M Series CW 44

**BARRICADES: TYPE II, MEDIUM-HIGH-INTENSITY (TYPICALLY ENCLOSED LENS, GLASS-BEAD ELEMENT)**

1. Avery Dennison, W2100 Series

**SIGNS: TYPE II, MEDIUM-HIGH-INTENSITY (TYPICALLY ENCLOSED LENS, GLASS-BEAD ELEMENT)**

1. Avery Dennison, T-2500 Series
2. Nippon Carbide Industries, Nikkalite 18000

**SIGNS: TYPE III, HIGH-INTENSITY (TYPICALLY ENCAPSULATED GLASS-BEAD ELEMENT)**

1. Avery Dennison, T-5500A and T-6500 Series
2. Nippon Carbide Industries, Nikkalite Brand Ultralite Grade II
3. 3M 3870 and 3930 Series

**SIGNS: TYPE IV, HIGH-INTENSITY (TYPICALLY UN-METALLIZED MICRO-PRISMATIC ELEMENT)**

1. Avery Dennison, T-6500 Series
2. Nippon Carbide Industries, Crystal Grade, 94000 Series
3. Nippon Carbide Industries, Model No. 94847 Fluorescent Orange
4. 3M Series 3930 and Series 3924S

**SIGNS: TYPE VI, ELASTOMERIC (ROLL-UP) HIGH-INTENSITY, WITHOUT ADHESIVE**

1. Avery Dennison, WU-6014
2. Novabrite LLC, "Econobrite"
3. Reflexite "Vinyl"
4. Reflexite "SuperBright"
5. Reflexite "Marathon"
6. 3M Series RS20

**SIGNS: TYPE VII, SUPER-HIGH-INTENSITY (TYPICALLY UN-METALLIZED MICRO-PRISMATIC ELEMENT)**

1. 3M Series 3924S, Fluorescent Orange
2. 3M LDP Series 3970

**SIGNS: TYPE VIII, SUPER HIGH INTENSITY (TYPICALLY UN-METALLIZED MICRO-PRISMATIC)**

1. Avery Dennison, T-7500 Series
2. Avery Dennison, T-7511 Fluorescent Yellow
3. Avery Dennison, T-7513 Fluorescent Yellow Green
4. Avery Dennison, W-7514 Fluorescent Orange
5. Nippon Carbide Industries, Nikkalite Crystal Grade Series 92800
6. Nippon Carbide Industries, Nikkalite Crystal Grade Model 92847 Fluorescent Orange

**SIGNS: TYPE IX, SUPER HIGH INTENSITY (TYPICALLY UNMETALLIZED MICROPRISMATIC)**

1. 3M VIP Series 3981 Diamond Grade Fluorescent Yellow
2. 3M VIP Series 3983 Diamond Grade Fluorescent Yellow/Green
3. 3M VIP Series 3990 Diamond Grade
4. Avery Dennison T-9500 Series
5. Avery Dennison, T 9513, Fluorescent Yellow Green
6. Avery Dennison, W9514, Fluorescent Orange
7. Avery Dennison, T-9511 Fluorescent Yellow

#### **SPECIALTY SIGNS**

1. Reflexite "Endurance" Work Zone Sign (with Semi-Rigid Plastic Substrate)

#### **ALTERNATIVE SIGN SUBSTRATES**

##### **FIBERGLASS REINFORCED PLASTIC (FRP) AND EXPANDED FOAM PVC**

1. Fiber-Brite (FRP)
2. Sequentia, "Polyplate" (FRP)
3. Inteplast Group "InteCel" (0.5 inch for Post-Mounted CZ Signs, 48 inch or less)(PVC)

##### **ALUMINUM COMPOSITE, TEMPORARY CONSTRUCTION SIGNS ONLY**

1. Alcan Composites "Dibond Material, 80 mils")
2. Mitsubishi Chemical America, Alpolc 350

**Pre-qualified and Tested Signing and Delineation Materials  
Supplement No.1**

Date 10/20/06

NOT TO BE INCLUDED IN SSP'S

This supplement listing is maintained by Traffic Operations at the request of Highway Maintenance. Products listed below are stocked by Caltrans, the Office of Procurement and Contracts and used by Caltrans Highway Maintenance Personnel. These product categories are not included in the listing of Pre-qualified and Tested Signing and Delineation Materials included in the SSPs, however, they may be used by contractors on California State Highways provided the products conform to Caltrans Standards Specifications.

**TRAFFIC CONES, [28"]**

1. Highway Safety products, Part #43280CTR64B
2. JBC Traffic Cone, Model RC70045CT

**PORTABLE HIGH-LEVEL FLAG-SIGN SUPPORT**

**QUADPOD (4 legs)**

1. Hawkins Traffic Safety Supply Co. Model V2EC-4401-4AC
2. Traffix Devices, Inc. "Econo-Buster" Model 80018

**DRIVE STAND (No Legs)**

1. Sierra Safety Co. Inc., "Quick Stand"

**BARRICADES, TYPE I, (Plastic)**

1. Bent Manufacturing, Unicade
2. Three D Traffic Works, Econocade model TD2150 and model 2100

**GROUND MOUNTED SMALL SIGN SUPPORTS**

1. Unistrut, "Quick Punch" ( 2") 14 Ga.
2. Unistrut, "Telespar" (2") 12 Ga., (2.5") 10Ga.
3. Western Highway Products Ulti-Mate, (2" & 2.5"), Both 12 & 14 Ga.

Note: This listing includes product manufacturers that have provided materials conforming to Caltrans Specifications. Products are routinely monitored to insure they continue to meet these specification and requirements.

For questions regarding this listing contact: Devinder Singh, Traffic Operations, (916) 654-4715 CALNET 8-464-4715 or Lisa Dobeck at (916) 227-7291 or Andy Rogerson, Transportation Laboratory, (916) 227-7289, 8-498-7289.

**1 SCOPE**

This specification covers pallets intended for use with low lift pallet trucks or forklift trucks.

**2 SPECIFICATION AND STANDARDS**

Specifications and standards referenced in this document in effect on the opening of the Invitation for Bid form a part of this specification where referenced.

**3 REQUIREMENTS****3.1 Material**

The pallets shall be constructed from nominal size standard or better (West Coast Lumber Inspection Bureau, Standard Grading Rules for West Coast Lumber) grade Douglas Fir, Hemlock, Larch or Hem-Fir. The stringers shall be S4S and the decking S4S or S1S2E (re-sawed) with no edge knots. Sawed side is to be assembled to the inside of the pallets. Fastening shall be accomplished with 2¼ inch (+1/16 inch) 7 penny flat head drive screws (helical threaded nail) or 2¼ (+1/16 inch) #10 wire gauge annular ring nails as recommended in Specifications and Grades for Warehouse. Permanent or Returnable Pallets of West Coast Woods as published by the National Wooden Pallet and Container Association (Specifications and Grades, NWPCA).

**3.2 Non-Standard Duty-Cycle Pallets**

When specifically requested by the user, pallets may be manufactured using pine, oak or ash woods.

**3.3 Construction**

Pallet type and construction shall comply with Specifications and Grades, NWPCA. The pallets shall be Grade "Quality" (QAL).

The decking shall be secured with 3 nails or screws at each surface of contact with the stringer. Nails shall not be within ½ inch of deck-board edges or another nails.

All leading and outside edges of the bottom deck shall be chamfered. The chamfers shall be at least 12 inches long and shall be cut on an approximate 35 degree angle to the face so as to leave an edge adjacent to the chamfer not less than ¼ inch nor more than ½ inch from the outer edge of the deck-board. The chamfer shall extend to within 3 inches of the stringers. Pallet configuration shall comply with table below.

**4 SAMPLING AND INSPECTION**

This commodity will be sampled and inspected for compliance to this specification as deemed necessary.

Sampling and inspection by attributes will be in accordance with ANSI/ASQ Z1.4 1993, Sampling Procedures and Tables for Inspection by Attributes. An inspection lot is defined as one delivery to one agency at one time.

**4.1 Workmanship**

The pallets shall be free from defects as outlined under Grade "Quality" (QAL) in the "Specifications and Grades", NWPCA.

**5 MARKING**

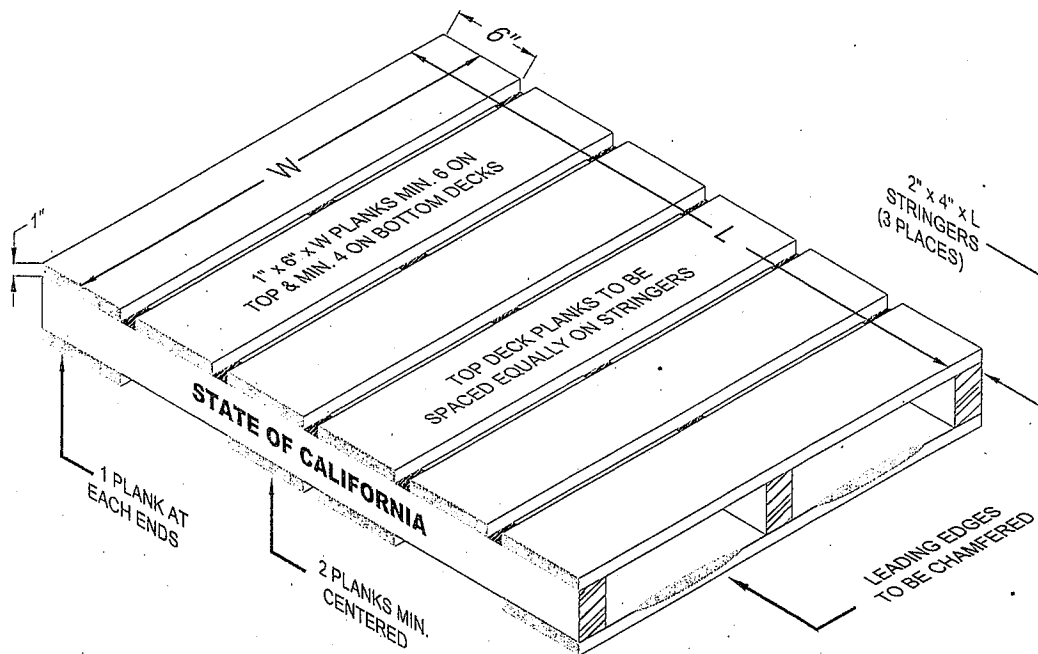
Each pallet shall be marked (two places), "STATE OF CALIFORNIA". Marking shall be easily readable, in black letters and on outboard faces of stringers.

COMMONLY USED PALLET TYPES & SIZE			
SIZE	TYPE	TOP DECK	BOTTOM DECK
1	2 (Fig. 1)	42"L x 36"W Six 1" x 6" x 36" deck-boards, spaced evenly along the pallet width	42"L x 36"W Min. Four 1" x 6" x 36" boards. One placed each end of the stringers Two at center of the stringers
2	2 (Fig. 1)	42"L x 42"W Six 1" x 6" x 42" deck-boards, spaced evenly along the pallet width	42"L x 42"W Min. Four 1" x 6" x 42" boards. One placed each end of the stringers Two at center of the stringers
3	2 (Fig. 1)	44"L x 44"W Six 1" x 6" x 44" deck-boards, spaced evenly along the pallet width	44"L x 44"W Min. Four 1" x 6" x 44" boards. One placed each end of the stringers Two at center of the stringers(Fig. 1)
4	2 (Fig. 1)	45"L x 36"W Six 1" x 6" x 36" deck-boards, spaced evenly along the pallet width	45"L x 36"W Min. Four 1" x 6" x 36" boards. One placed each end of the stringers Two at center of the stringers
5	2 (Fig. 1)	46"L x 44"W Six 1" x 6" x 44" deck-boards, spaced evenly along the pallet width	46"L x 44"W Min. Four 1" x 6" x 44" boards. One placed each end of the stringers Two at center of the stringers
6	2 (Fig. 1)	48"L x 48"W Six 1" x 6" x 48" deck-boards, spaced evenly along the pallet width	48"L x 48"W Min. Four 1" x 6" x 48" boards. One placed each end of the stringers Two at center of the stringers

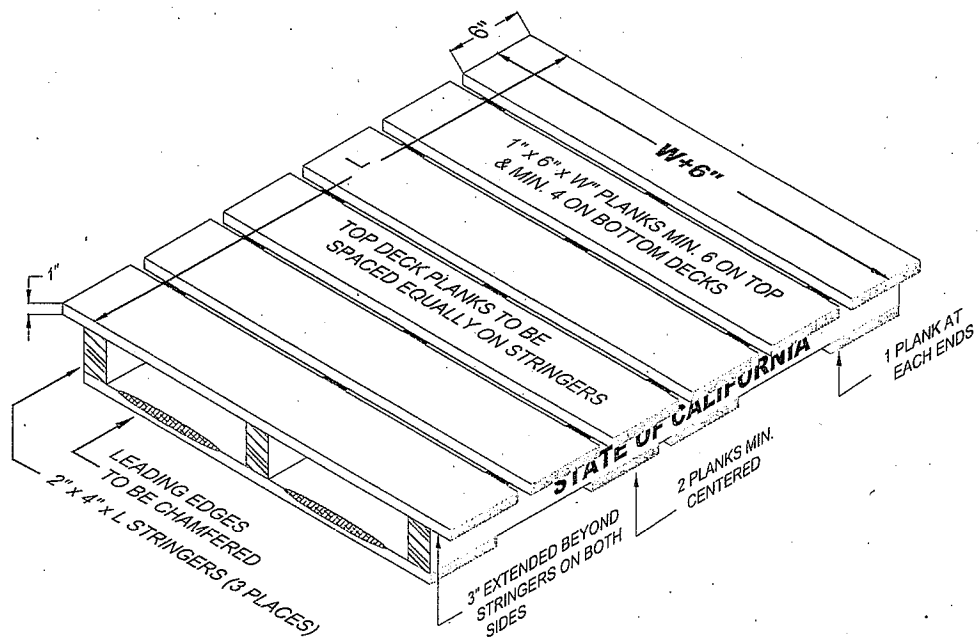
**Note:**

SIZE 1, TYPE 4 - has a single wing applied to top deck.

1	4 (Fig. 2)	42"L x 36"W Six 1" x 6" x 36" deck-boards, spaced evenly along the pallet width with 3" wings extending beyond the stringers outboard faces	42"L x 30"W Min. Four 1" x 6" x 36" boards. One placed each end of the stringers, Two at center of the stringers
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**FIG. 1 - TYPE 2  
WOODEN PALLET**



**FIG. 2 - TYPE 4  
SINGLE WING WOODEN PALLET**